

FIG. 1

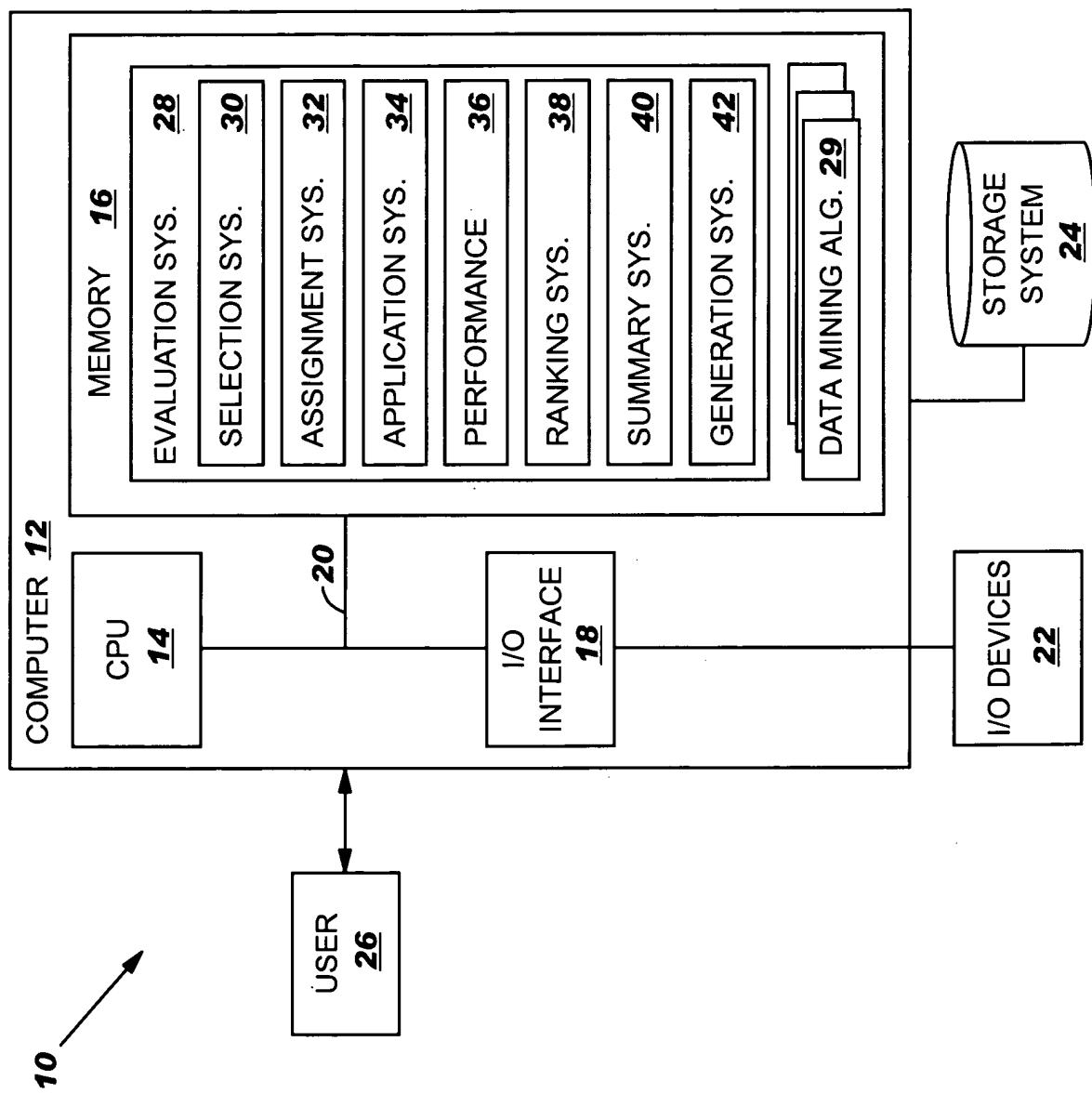


FIG. 2

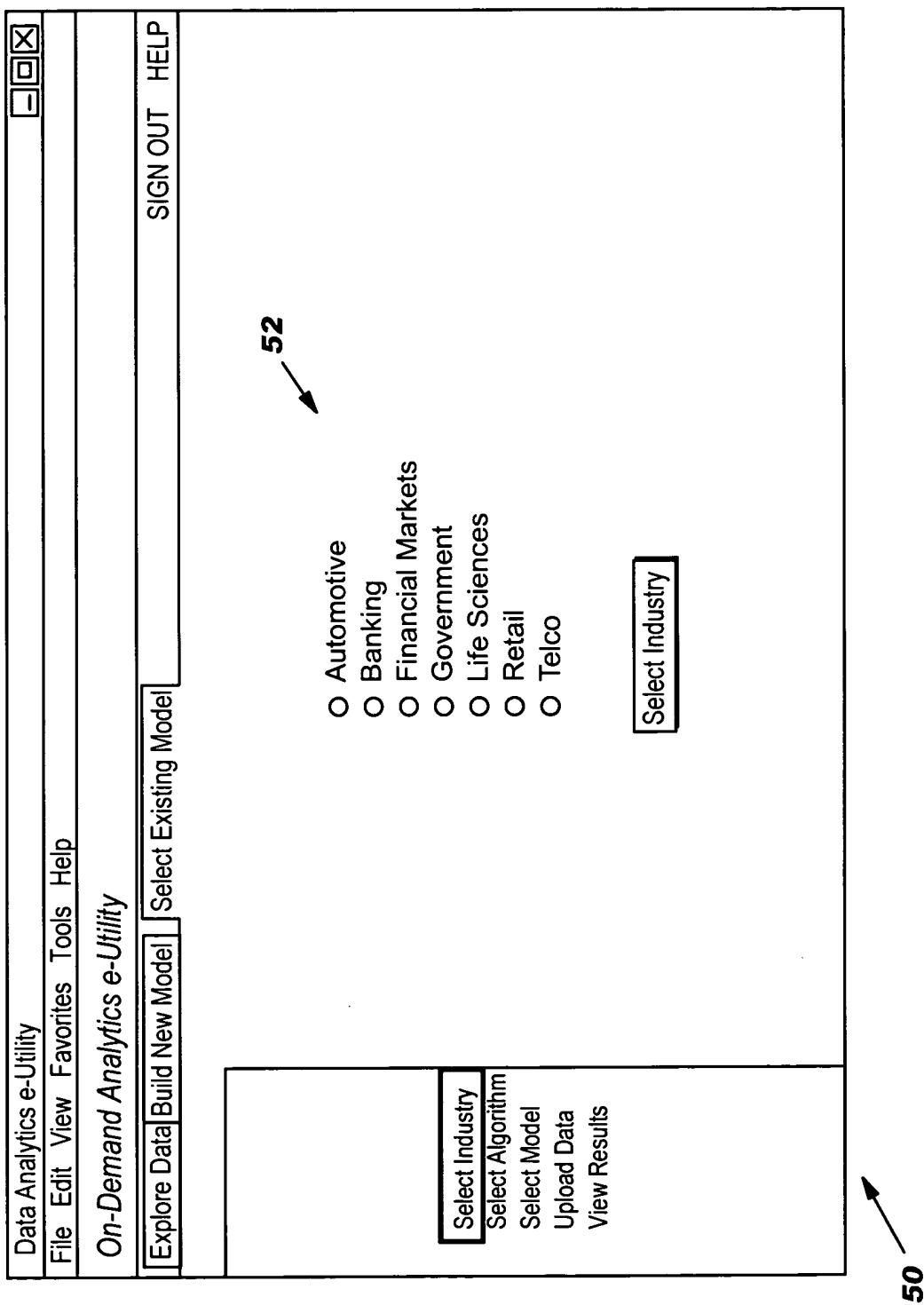
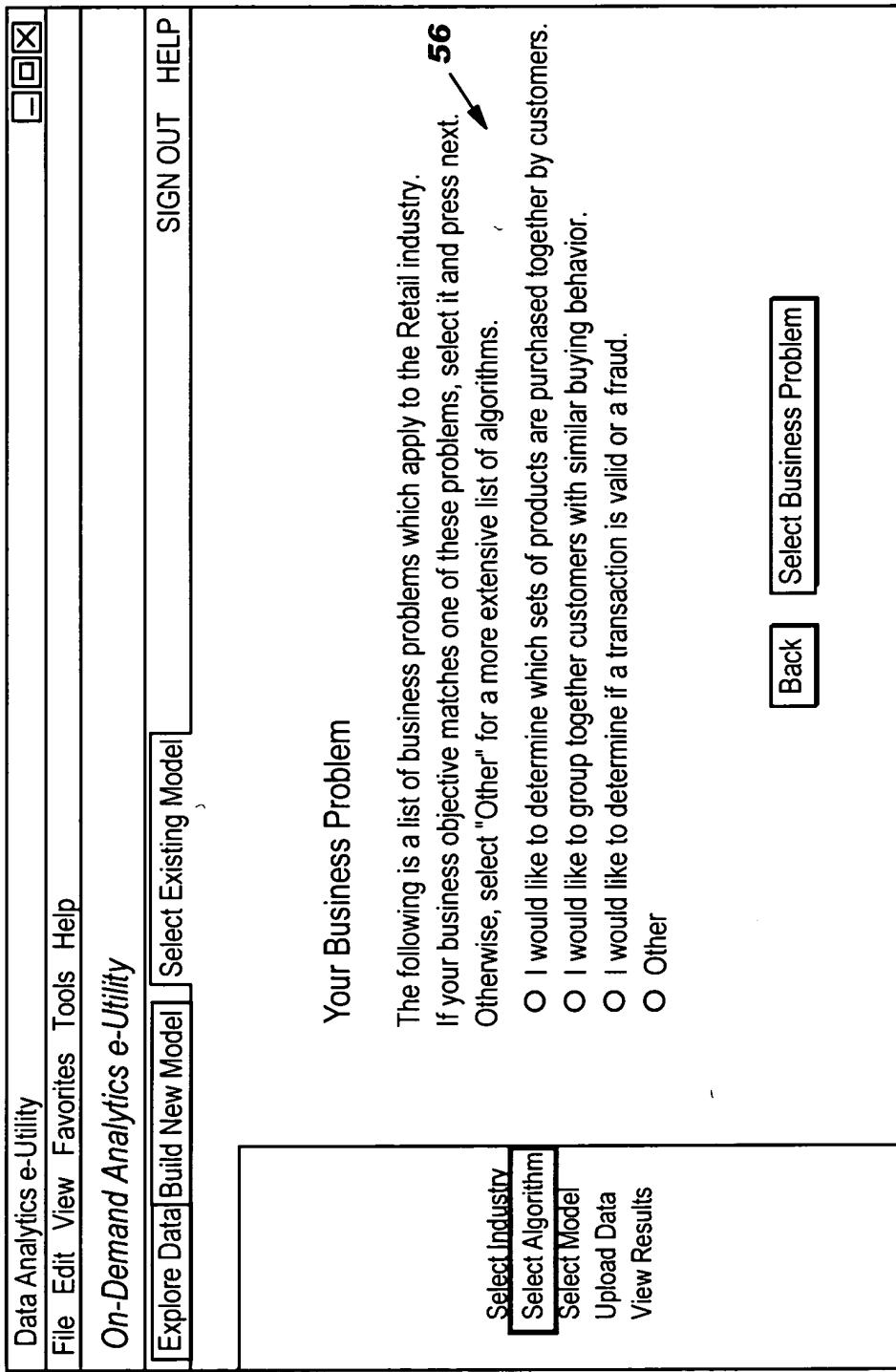


FIG. 3



54

FIG. 4

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| Data Analytics e-Utility | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|--|--|--------|-----------|-------------|------|---|---|---|---|---|---|------------------|---|---|---|---|---|---|---|-----------------|--|--|--|--|---|---|---|--|---|---|---|---|---|---|---|---|---|---|------------------|--|--|--|--|
| File | Edit | View | Favorites | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tools | Help | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On-Demand Analytics e-Utility | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Explore Data | Build New Model | Select Existing Model | SIGN OUT HELP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Basic"/> <input type="button" value="Advanced"/> | | <input type="button" value="Input data"/> <input type="button" value="Input fields"/> <input type="button" value="Field parameters"/> <input type="button" value="Filters"/> <input type="button" value="Settings"/> <input type="button" value="Model goal"/> | 62 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <caption>Misclassification Cost</caption> <thead> <tr> <th>Actual</th> <th>Predicted</th> <th>Explanation</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>N</td> <td>The actual value of diseased is Y, but the model predicted a value of N</td> <td> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td colspan="5">most acceptable</td> </tr> </table> </td> </tr> <tr> <td>N</td> <td>Y</td> <td>The actual value of diseased is N, but the model predicted a value of Y</td> <td> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td colspan="5">least acceptable</td> </tr> </table> </td> </tr> </tbody> </table> | | | | Actual | Predicted | Explanation | Cost | Y | N | The actual value of diseased is Y, but the model predicted a value of N | <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td colspan="5">most acceptable</td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | O | O | O | O | O | most acceptable | | | | | N | Y | The actual value of diseased is N, but the model predicted a value of Y | <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td colspan="5">least acceptable</td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | O | O | O | O | O | least acceptable | | | | |
| Actual | Predicted | Explanation | Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | N | The actual value of diseased is Y, but the model predicted a value of N | <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>O</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td colspan="5">most acceptable</td> </tr> </table> | 1 | 2 | 3 | 4 | 5 | O | O | O | O | O | most acceptable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| most acceptable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O | O | O | O | O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| least acceptable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Select Industry"/> <input type="button" value="Select Algorithm"/> <input type="button" value="Upload Data"/> <input style="border: 2px solid black; padding: 2px; margin-right: 10px;" type="button" value="Set Parameters"/> <input type="button" value="View Results"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Back"/> <input type="button" value="Generate Model"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

60

FIG. 5

| ACTUAL | PREDICTED | ERROR | WEIGHT |
|--------|-----------|-------|--------|
| A | A | NO | |
| A | B | YES | 0.8 |
| A | C | YES | 0.7 |
| B | A | YES | 0.8 |
| B | B | NO | |
| B | C | YES | 1.0 |
| C | A | YES | 0.3 |
| C | B | YES | 0.3 |
| C | C | NO | |

64 
66 

FIG. 6

| ACTUAL | PREDICTED | ERROR | WEIGHT | RATE | VECTOR |
|--------|-----------|-------|--------|------|--------|
| A | A | NO | | | |
| A | B | YES | 0.8 | 30 | 24 |
| A | C | YES | 0.7 | 30 | 21 |
| B | A | YES | 0.8 | 50 | 40 |
| B | B | NO | | | |
| B | C | YES | 1.0 | 40 | 40 |
| C | A | YES | 0.3 | 30 | 9 |
| C | B | YES | 0.3 | 60 | 18 |
| C | C | NO | | | |

PERFORMANCE VALUE = 152

68 70 72 74